

## 35–520 Removal and installation of rear axle center piece with rear axle shafts

### C. Model 123



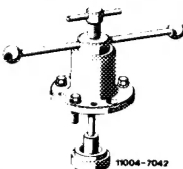
#### Oil type and capacity

Hypoid gear oil SAE 90	refer to specifications for service products page no. 235
Capacity	1 litre

#### Tightening torques

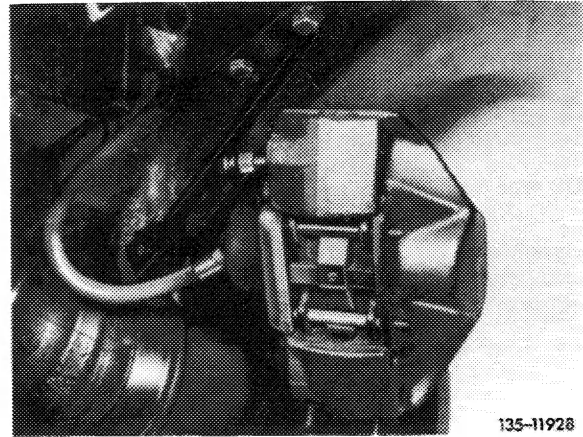
Tightening torques		Nm
Hex bolts for attaching rear rubber bearing to rear axle end cover		120
Hex bolts, self-locking for attaching rear rubber bearing to frame floor		30
Hex bolt for attaching rear axle shaft to rear axle shaft flange		30
Self-locking nuts for attaching rear axle center piece to rear axle carrier		100
Lock nut of propeller shaft (2-piece)		30—40
Lock-nut of propeller shaft (3-piece)	front	30—40
	rear	200
Studs on rear axle housing		50

#### Special tools

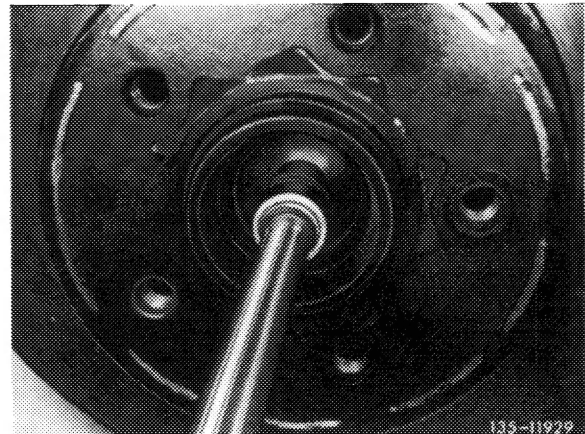
Vehicle jack top for removal and installation of rear axle center piece		115 589 35 63 00
Torque wrench with plug-in ratchet 1/2" square	25–130 Nm	001 589 66 21 00
	40–200 Nm	001 589 67 21 00
Open end wrench 46 mm for torque wrench for clamping nut of propeller shaft		126 589 00 01 00
Assembly tool for removal and installation of rear axle shaft on rear axle shaft flange		116 589 24 61 00

## Removal

- 1 Drain oil from rear axle.
- 2 Unscrew caliper at the right and hang up on a hook.



- 3 Loosen hex. screw on both sides and remove together with spacing sleeve and clamping disc for fastening rear axle shaft to rear axle shaft flange.



- 4 If required, force rear axle shaft out of rear axle shaft flange by means of assembly fixture.

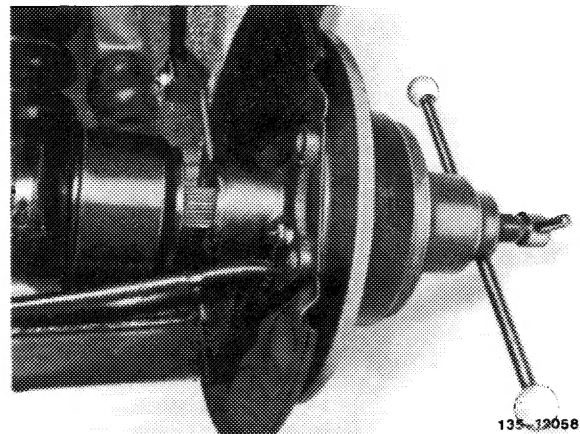
### Attention!

When removing assembly tool be sure to hold rear axle shaft in place. Do not let rear axle shaft drop down, since this would damage the housing of the synchromesh joint and make it leak.

If the rear axle shaft cannot be removed in spite of being fully telescoped, loosen rubber bearing from frame floor and rear center piece from rear axle carrier.

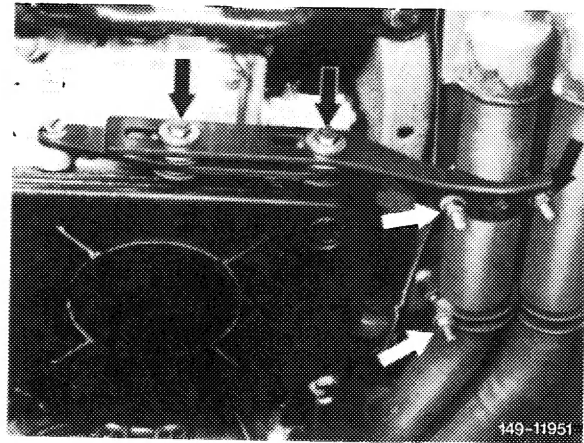
Lower center piece and swivel to one side. Then remove rear axle shaft from rear axle shaft flange.

Do not release shock absorbers, since they are required for holding axle.



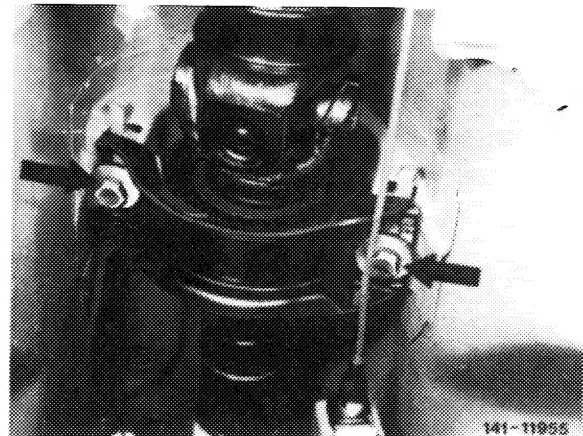
5 Remove exhaust system starting at plug connection (models 123.026, 03, 05, 09, only).

6 Unscrew shielding plate (models 123.026, 03, 05, 09).

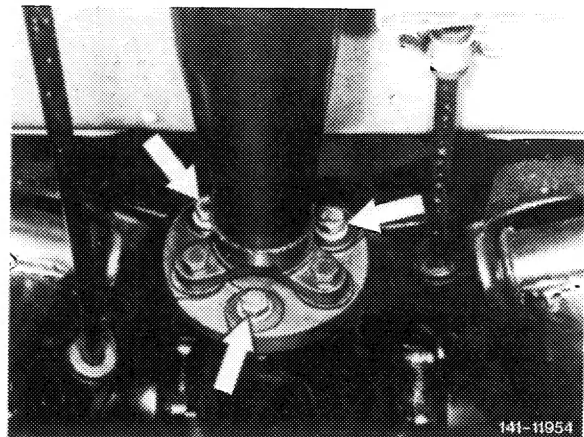


7 Loosen lock nut and propeller shaft intermediate bearing on frame floor.

**Note:** On three-piece propeller shaft loosen only front lock nut or both propeller shaft intermediate bearings on frame floor.



8 Unflange propeller shaft on rear axle and push forward out of concentric alignment.

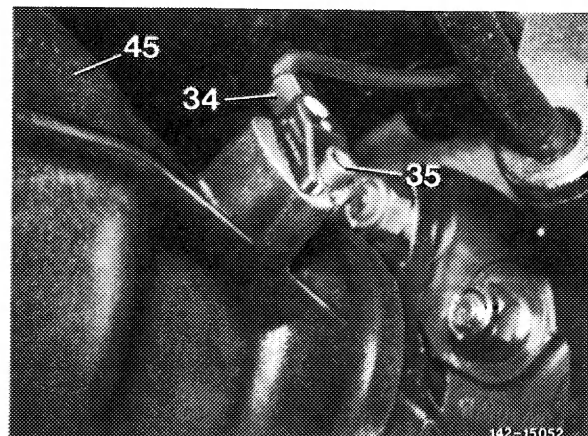


## 9 Vehicles with ABS

a Loosen hex. socket screw (35) and remove rpm sensor (34) from rear axle housing (45).

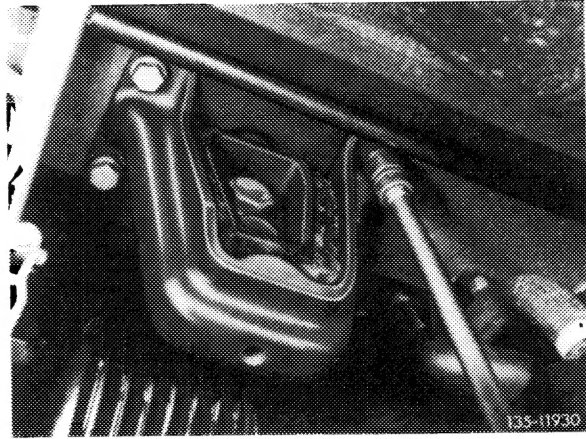
### Attention!

Protect rpm sensor against damage. Do not put cable under tensile stress.



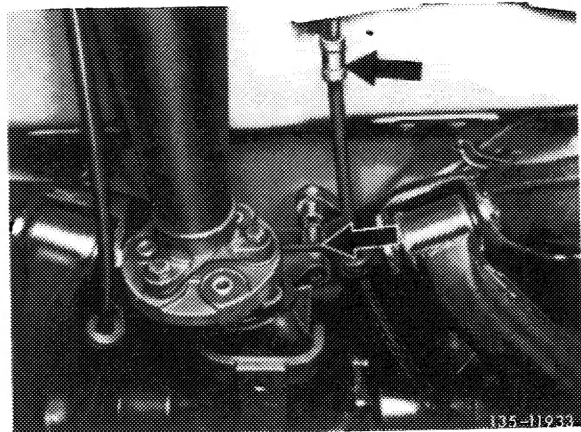
10 Support rear axle housing with a vehicle jack or pitlift and vehicle jack top.

11 Unscrew rear rubber bearing on frame floor.

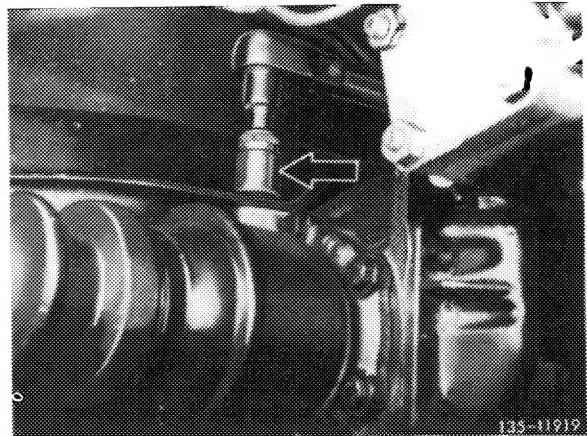


12 Lower vehicle jack or pitlift until self-locking hex nuts are accessible. At the left, loosen hand brake cable attachment to frame floor (arrow).

13 Unscrew rear axle center piece front from rear axle carrier (arrow).



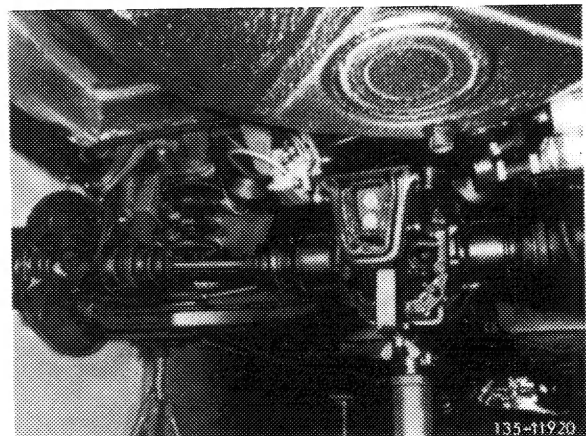
14 Unscrew rear axle center piece rear from rear axle carrier (arrow).



15 Lower rear axle center piece and remove together with rear axle shafts.

**Attention!**

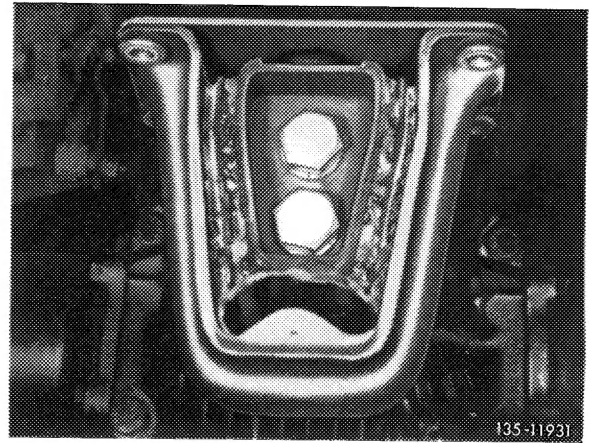
When transporting rear axle center piece with rear axle shafts make sure, that the **rear axle shafts are not falling down**, since this would result in damage and leaks to the housings of the both inner synchromesh joints.





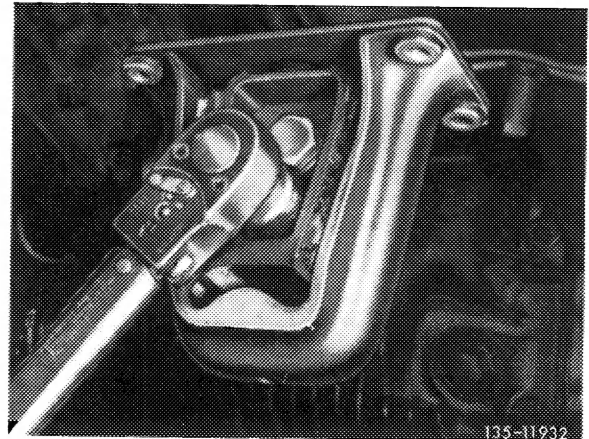
16 Unscrew rubber bearing from rear axle center piece.

17 Check rubber bearing and renew, if required.

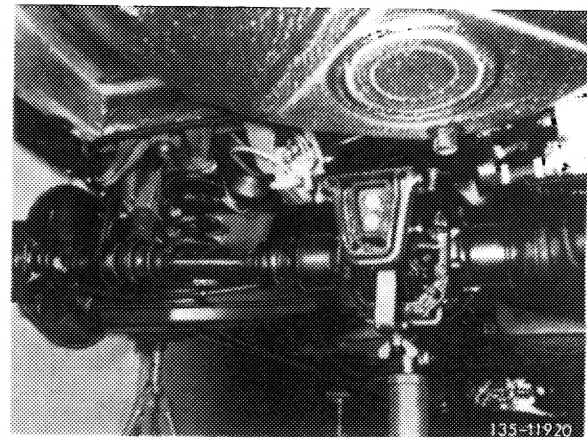


### Installation

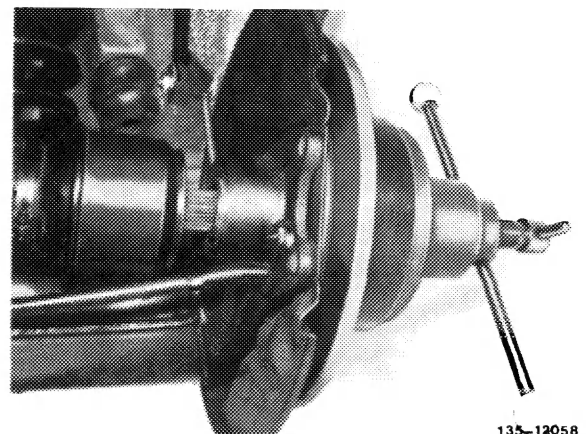
18 Attach rubber bearing to rear axle center piece, tighten hex bolts to 120 Nm.



19 Place rear axle center piece with rear axle shafts on vehicle jack top and move into installation position.



20 Insert rear axle shafts into rear axle shaft flange by means of assembly fixture.

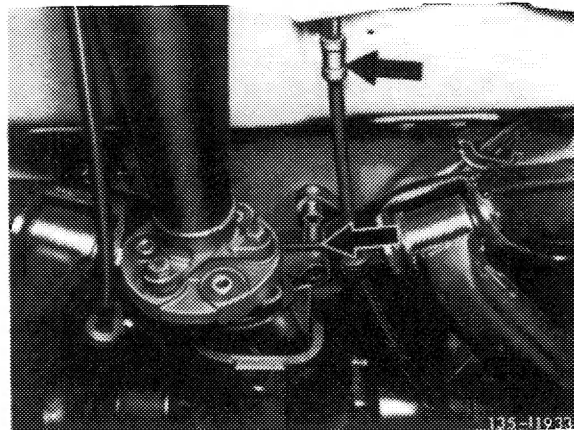


21 Lift rear axle center piece and mount on rear axle carrier. Prior to positioning self-locking hex. nuts, mount washers. Tighten self-locking hex. nuts to 100 Nm.

**Attention!**

Replace self-locking hex. nuts on principle.

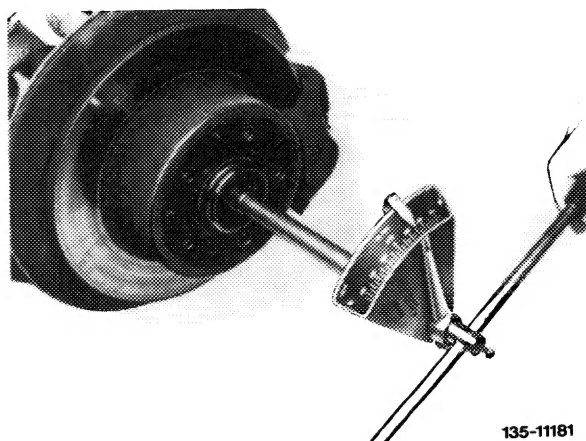
22 Attach brake cable control at the left to frame floor (arrow).



23 Mount hex. screws with clamping disc and spacing sleeves and tighten to 30 Nm.

**Attention!**

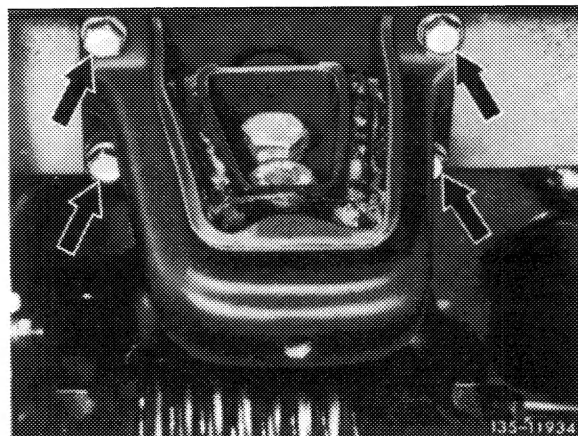
Renew clamping disc after one-time use. Provide clamping disc with oil in range of screw head. Pay attention to correct length of spacing sleeve and hex. screw (refer to 35—110).



24 Lift rear axle center piece up to frame floor and attach rubber bearing to frame floor. Tightening torque of self-locking hex bolts 30 Nm.

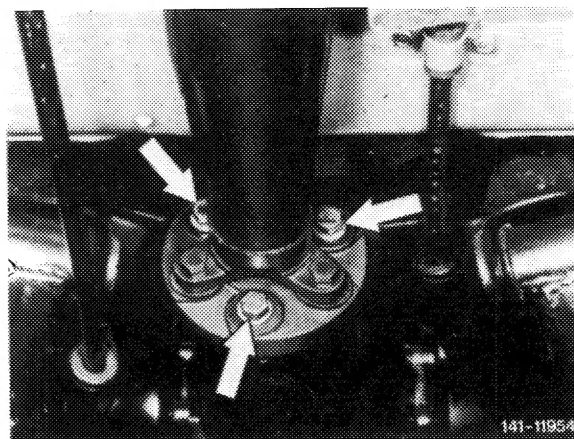
**Attention!**

Use self-locking hex bolts only once.



25 Mount propeller shaft to universal flange of drive pinion.

26 Attach propeller shaft intermediate bearing to frame floor, but do not yet tighten.

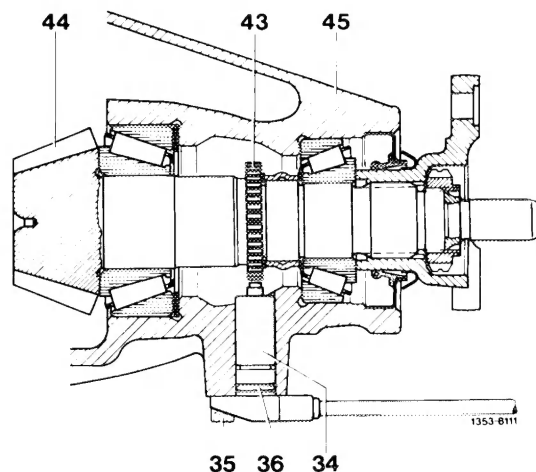


## 27 Vehicles with ABS

**Note:** Prior to installation make sure that no metallic foreign particles are located on magnetic edge of rpm sensor.

- a Renew O-ring (36) on rpm sensor (34).

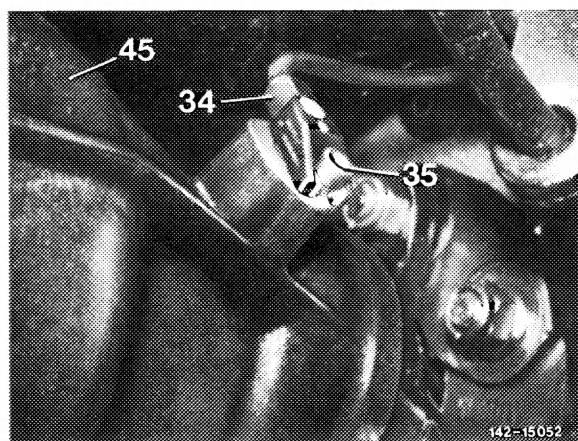
34 Rpm sensor	43 Gear wheel (rotor)
35 Hex. socket screw	44 Drive pinion
36 O-ring	45 Rear axle housing



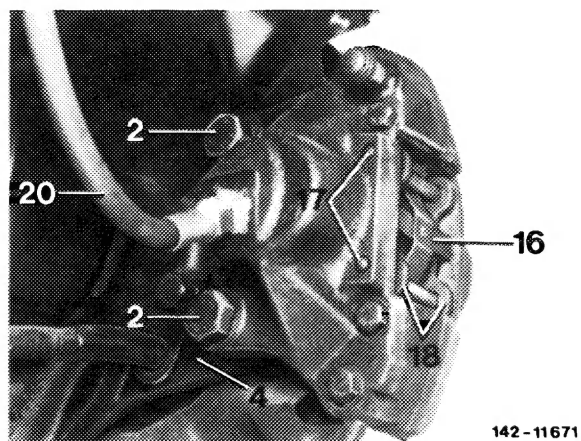
- b Insert rpm sensor (34) into rear axle housing (45), making sure that the O-ring (36) is not damaged.

**Note:** Use self-locking hex. socket screw only once.

- c Attach rpm sensor to rear axle housing by means of hex. socket screw (35).

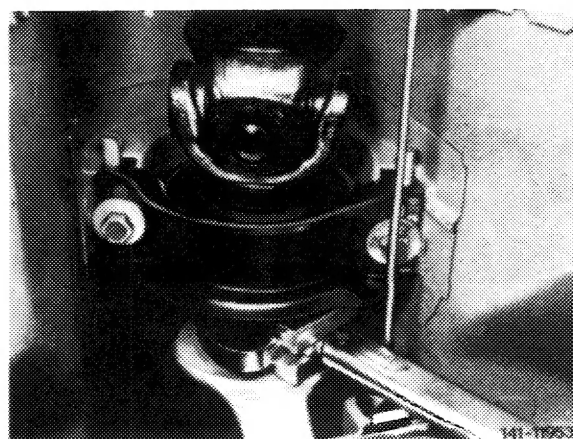


- 28 Mount fixed caliper. Tightening torque of self-locking hex. screws 90 Nm.



- 29 Fill oil into rear axle up to overflow on filler hole.

- 30 Tighten clamping nut on propeller shaft to 30–40 Nm.



31 Tighten propeller shaft intermediate bearing.

32 Install shielding plate and exhaust system  
(models 123.026, 03, 05, 09 only).

